BLACK BOX®
NETWORK SERVICES

© 2007. All rights reserved. Black Box Corporation.

FREE 24-hour Tech Support: 724-746-5500
blackbox.com

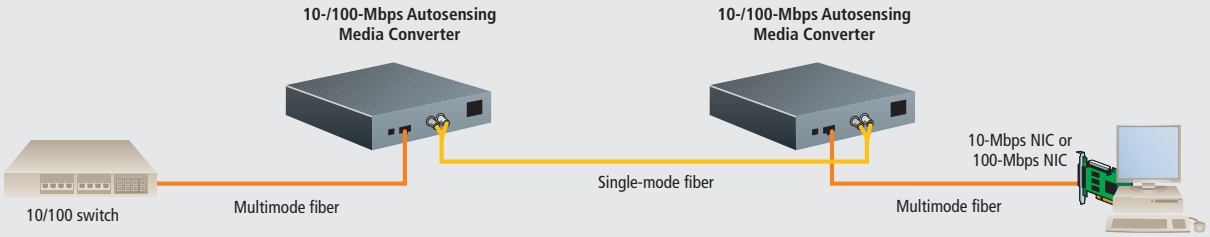
10-/100-Mbps Autosensing Media Converters

Convert either 10BASE-T or 100BASE-TX to fiber with this autosensing 10-/100-Mbps media converter.

FEATURES

- 10-/100-Mbps autosensing on the copper port.
- Choose multimode or single-mode, ST or SC connectors.
- Internal power supply is included.
- Only 1U high—fits nearly anywhere!

Use a pair of media converters to connect two multimode fiber optic network segments via single-mode fiber.



NOTE: This application will not work with a 10-/100-Mbps autosensing network interface card (NIC).

OVERVIEW

Connect 10BASE-T or 100BASE-TX devices to your fiber-based cabling infrastructure with a BLACK BOX® 10-/100-Mbps Autosensing Media Converters. You can use these versatile media converters to convert 10BASE-T to fiber now and 100BASE-TX to 100BASE-SX or 100BASE-FX fiber later.

Reduce fiber connectivity costs by using these 1U-high media converters as the link between your fiber network and your copper-based switches. Not only are they ideal for future-proofing your fiber-to-desktop applications, they also make upgrading to 100-Mbps workstations affordable. All you have to do is change the network interface card. It's that simple!

The converters are available in multimode and single-mode versions with ST or SC connectors. Choose multimode for shorter distances (up to 984.3 ft. [300 meters]) and short-wave transmissions over 850-nm fiber in accordance with the 100BASE-SX standard. Or choose the multimode models that support 1300-nm fiber at distances up to 1.2 miles (2 km). Single-mode versions support distances up to 49.7 miles (80 km) and transmit over 1300- or 1550-nm fiber. The 1300-nm multimode versions and the single-mode versions are 100BASE-FX compliant.

Power is supplied through an internal 100-/240-VAC power supply, eliminating the need for unreliable, bulky external AC/DC transformers.

Link-Fault Detection helps you easily locate faults. When faults occur, the front-panel LEDs light and show you exactly where the cable fault is located. The converters also feature a button by the twisted-pair port for selecting a crossover workstation connection or a pass-through repeater/hub/switch connection.

The converter has three modes of operation:

- **PNP/Transparent.** Autonegotiating, in which the converter automatically configures for 10 or 100 Mbps and half- or full duplex. This is the default operation mode.
- **Force-10.** The unit acts as a regular 10BASE-T↔10BASE-FL converter.
- **Force-100.** The unit functions as a 100BASE-TX↔100BASE-SX (LMC7001A-R4–LMC7002A-R4), or 100BASE-TX↔100BASE-FX converter (LMC7005A–LM7006A, LMC7003A-R4–LMC7004A-R4, LMC7007A–LM7009A).

TYPICAL APPLICATIONS

These media converters are ideally suited for small companies and remote campuses requiring minimal fiber connectivity.

The typical user has a 10-Mbps fiber network, plans to upgrade to 100 Mbps in the future, and doesn't want to buy new media converters for the upgrade.

LMC7001A-R4

TECH SPECS

Fiber Cable Requirements —
LMC7001A-R4–LMC7002A-R4: Multimode duplex, 850 nm;
LMC7005A–LMC7006A: Multimode duplex, 1300 nm
LMC7003A-R4–LMC7004A-R4, LMC7007A–LMC7008A: Single-mode duplex, 1310 nm;
LMC7009A: Single-mode duplex, 1550 nm
Full-Duplex Distance (Maximum) —
LMC7001A-R4–LMC7002A-R4: 984.3 ft. (300 m);
LMC7005A–LMC7006A: 1.2 mi. (2 km);
LMC7003A-R4–LMC7004A-R4: 24.8 mi. (40 km);
LMC7007A–LMC7009A: 49.7 mi. (80 km)
Standards —
All: IEEE 802.3: 10BASE-T, 10BASE-FL;
LMC7001A-R4–LMC7002A-R4: 100BASE-TX, 100BASE-SX;
LMC7005A–LMC7006A, LMC7003A-R4–LMC7004A-R4, LMC7007A–LMC7009A: IEEE 802.3u: 100BASE-TX, 100BASE-FX
User Controls — (1) external 8-position DIP switch, (1) twisted-pair crossover/pass-through button
Connectors — All: (1) RJ-45, (1) IEC 320 power connector;
LMC7001A-R4, LMC7005A, LMC7003A-R4, LMC7007A: (1) pair of ST®;
LMC7002A-R4, LMC7006A, LMC7004A-R4, LMC7008A–LMC7009A: (1) pair of SC
Indicators — (9) LEDs:
(1) PWR: On when unit has power;
Twisted-pair ports (TX): (1) Link; (1) Act;
(1) 100: On when 100-Mbps data is detected;
(1) LFD: On when Link Fault Detection is available (only in PNP/Transparent mode);
(1) A: On when PNP/Transparent mode is enabled;
Fiber ports (SX):
(1) Link: On when link is established and all cables are connected;
(1) Act: Blinks when data is detected;
(1) 100: On when 100-Mbps data is detected
Power — 100/240 VAC (±10%), 50/60 Hz, 0.1/0.05 A
Size — 1.75"H (1U) x 4.7"W x 4.4"D (4.4 x 11.9 x 11.2 cm)
Weight — 1.3 lb. (0.6 kg)

Item	Code
10BASE-T/100BASE-TX to 100BASE-SX Autosensing Media Converters	
Multimode	
850-nm, 300 m	
ST	**LMC7001A-R4**
SC	**LMC7002A-R4**
10BASE-T/100BASE-TX to 100BASE-FX Autosensing Media Converters	
Multimode	
1300-nm, 2 km	
ST	**LMC7005A**
SC	**LMC7006A**
Single-Mode	
1310-nm, 40 km	
ST	**LMC7003A-R4**
SC	**LMC7004A-R4**
1310-nm, 80 km	
ST	**LMC7007A**
SC	**LMC7008A**
1550-nm, 80 km	
SC	**LMC7009A**
You may also want to order cable…	
Multimode Duplex Fiber Optic Cable, PVC, Custom Lengths	
ST–ST	**EFN062-CC**
SC–SC	**EFN4025**
Single-Mode Duplex Fiber Optic Cable, PVC, Custom Lengths	
ST–ST	**EFN5009**
SC–SC	**EFN5010**

Why Buy From Black Box? Exceptional Value. Exceptional Tech Support. Period.

Recognize any of these situations?

- **You wait more than 30 minutes to get through to a vendor's tech support.**
- **The so-called "tech" can't help you or gives you the wrong answer.**
- **You don't have a purchase order number and the tech refuses to help you.**
- **It's 9 p. m. and you need help, but your vendor's tech support line is closed.**

According to a survey by Data Communications magazine, 90% of network managers surveyed say that getting the technical support they need is extremely important when choosing a vendor. But even though network managers pay anywhere from 10 to 20% of their overall purchase price for a basic service and support contract, the technical support and service they receive falls far short of their expectations—and certainly isn't worth what they paid.

At Black Box, we guarantee the best value and the best support. You can even consult our Technical Support Experts before you buy if you need help selecting just the right component for your application.

Don't waste time and money—call Black Box today.